

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

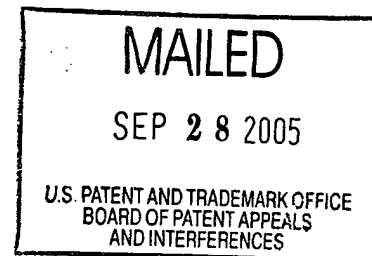
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YVAN NOVIS, JEAN-MICHEL DEPAUW,
and DANIEL DECROUPET

Appeal No. 2005-0672
Application No. 09/719,141

HEARD: AUGUST 10, 2005



Before WALTZ, KRATZ and PAWLIKOWSKI, Administrative Patent Judges.
KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 25-71, which are all of the claims pending in this application.

BACKGROUND

Appellants' invention relates to a transparent substrate carrying a coating stack useful for forming glazing panels, such as a vehicle windshield. The coated substrate includes metal and dielectric coating layers. According to appellants (specification, page 5), the coated substrate is capable of withstanding a bending or tempering type of heat treatment by the presence of partially oxidized sublayers of two metals in the coated stack prior to heat treatment. A further understanding of

the invention can be derived from a reading of exemplary claims 25 and 52, which are reproduced below.

25. Transparent substrate carrying a coating stack comprising at least one metallic coating layer comprising silver or a silver alloy, each metallic coating layer being in contact with two non-absorbent transparent dielectric coating layers, the coated substrate being adapted to withstand a bending or tempering type of heat treatment, characterized in that prior to such heat treatment, each of the dielectric coating layers comprises a sub-layer based on a partially but not totally oxidized combination of at least two metals.

52. Glass substrate carrying a coating stack comprising, in order from the glass substrate:
a non-absorbent transparent coating layer comprising a layer of a partially but not totally oxidized combination of at least two metals;
a metallic coating layer selected from the group consisting of silver and silver alloys;
a non-absorbent transparent coating layer comprising a layer of a partially but not totally oxidized combination of at least two metals.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Proscia	5,168,003	Dec. 01, 1992
Jenkinson	5,505,989	Apr. 09, 1996
Hartig et al. (Hartig)	5,584,902	Dec. 17, 1996
Guiselin	5,595,825	Jan. 21, 1997
Anderson et al. (Anderson)	5,952,084	Sep. 14, 1999

Claims 25-28, 31-35, 43, 46, 49-57 and 61-66 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hartig. Claims 25-29, 31, 34, 35, 43, 46, 52-56 and 61-65 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Guiselin. Claims 36-42, 44, 45, 47, 48, 58, 59, 67 and 68 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hartig. Claims 60 and 69-71 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hartig in view of Anderson or Proscia. Claims 36-42, 44, 45, 47 and 48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Guiselin. Claim 30 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Guiselin in view of Jenkinson. Claims 30, 32, 33, 60 and 69-71 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Guiselin in view of Anderson or Proscia.

We refer to the brief and to the answer for a complete exposition of the opposing viewpoints expressed by appellants and the examiner concerning the issues before us on this appeal.

OPINION

Having carefully considered each of appellants' arguments set forth in the brief, appellants have not persuaded us of reversible error on the part of the examiner. Accordingly, we will affirm the examiner's rejections for substantially the

reasons set forth by the examiner in the answer. We add the following for emphasis.

§ 102 Rejections

A prior art reference anticipates the subject matter of a claim when the reference discloses every feature of the claimed invention, either explicitly or inherently (see Hazani v. Int'l Trade Comm'n, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed. Cir. 1997) and RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984)). However, the law of anticipation does not require that the reference teach what the appellants teach in their specification, but only that the claims on appeal "read on" something disclosed in the reference (see Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984)). Anticipation under this section is a factual determination. See In re Baxter Travenol Labs., 952 F.2d 388, 390, 21 USPQ2d 1281, 1283 (Fed. Cir. 1991) (citing In re Bond, 910 F.2d 831, 833, 15 USPQ2d 1566, 1567 (Fed. Cir. 1990)).

Regarding the examiner's anticipation rejection of claims 25-28, 31-35, 43, 46, 49-57 and 61-66 over Hartig, appellants argue the claims as one grouping. Accordingly, we select claim

52 as the representative claim on which we shall decide this appeal as to the examiner's anticipation rejection over Hartig.

Hartig discloses a glass substrate with a coating stack that includes a silver layer sandwiched between nichrome layers. See, e.g., column 11, lines 12-24 of Hartig. As determined by the examiner (answer, pages 4 and 5 and 16), Hartig discloses that the nichrome layer referred to therein can be oxidized such that some metal remains (partially oxidized). In this regard, Hartig discloses that the term nichrome layer is used to specify a layer that is either a metal layer of "some combination of nickel and chromium, at least some of which is in its metallic state, although same [sic, some] may be oxidized." See the paragraph bridging columns 8 and 9 of Hartig.

Appellants acknowledge that Hartig discloses a glass substrate coated with layers that include a silver layer with a nichrome layer option on either side thereof (brief, page 9). However, appellants maintain that the nichrome (Ni-Cr) layer of Hartig is not taught as being partially oxidized, as required by representative claim 25. In this regard, appellants argue that the disclosure at the paragraph bridging columns 8 and 9 of Hartig was a reference to unspecified prior art in Hartig, not the inventive embodiments described by Hartig. Appellants

contend that Hartig does not refer to partially oxidized nickel or nichrome layers in the summary and detailed description of the invention set forth therein. Also, appellants maintain that Hartig does not use the exact phrase "partial but not totally oxidized" as employed in representative claim 52. The language employed by Hartig is considered too generic by appellants to convey possession of the here claimed subject matter.

In support, appellants note that Hartig teaches a metallic nichrome as evinced by a reference to the second metallic layer (107) as "substantially pure metallic 80/20 nichrome. . . formed in the same way as the first. . . nichrome layer 103. . . ." See column 13, lines 52-55 of Hartig and page 11 of the brief. Moreover, appellants (brief, pages 11-13) contend that Hartig discloses depositing the nichrome layers in either an inert or 5-10% oxygen atmosphere, which latter oxygen containing atmosphere and sputtering conditions employed by Hartig would result in a purely metallic layer deposition as further evidenced by EP 0 657 562.

Like, the examiner, we do not find these arguments and evidence persuasive. As correctly noted by the examiner (answer, pages 16 and 17), Hartig's definition of nichrome presented at pages 8 and 9 thereof is not a definition limited to prior art

nichrome uses as seemingly argued, but rather is a definition for that term as employed by applicants in the patent, as expressly articulated in that paragraph. Also, we agree with the examiner's assessment that the generic language employed by Hartig in defining nichrome basically encompasses two embodiments, a purely metallic state nichrome, or a nichrome which is partially oxidized such that some nichrome remains in the metallic state. Indeed, even if we could agree with appellants that the nichrome definition of Hartig encompassed a third completely oxidized embodiment, it is noted that a list of such a small number of choices (three choices) represents a complete description of each. See In re Schaumann, 572 F.2d 312, 316, 197 USPQ 5, 9 (CCPA 1978) (prior art preferred genus which disclosed limited species, inclusive of claimed species, constituted description of the claimed species within the meaning of 35 U.S.C. § 102(b)); In re Petering, 301 F.2d 676, 681, 133 USPQ 275, 280 (CCPA 1962) (prior art genus containing only 20 compounds inherently anticipated a claimed species within the genus because "one skilled in [the] art would . . . envisage each member" of the genus).

Nor do we agree with appellants that Hartig's disclosed use of 5-10% oxygen in the sputtering deposition would result in an

non-oxidized metallic deposit, as argued. In this regard, we note that the graphed data in EP 0 657 562, as relied upon in support by appellants, relates to the deposit of titanium or zirconium, not nichrome as at issue here. Moreover, EP 0 657 562 teaches that whether a deposited metal is oxidized depends on other factors, such as the target size and other cathode operating parameters besides the percent oxygen in the atmosphere and the power levels employed in the sputtering. See, e.g., page 2, lines 53 and 54 of EP 0 657 562. Furthermore, the graphs of EP 0 657 562 show a trend teaching that lower power levels result in a lower switch point to oxide formation for both titanium and zirconium, not the opposite as apparently argued by appellants.¹ In this regard, we note that Hartig teaches using no power with a 5% oxygen atmosphere at column 19, lines 36-38.

Furthermore, as pointed out by the examiner at page 18 of the answer, Hartig is not limited to the examples presented therein. It follows that on this record, we will sustain the examiner's anticipation rejection over Hartig.

¹ Even if we could agree with appellants' comparison, which we do not, the conclusions in the sentences following the table at page 12 of the brief appear to represent an incorrect reading of the graphs of EP 0 657 562 because lower power levels are associated with lower switching points to oxide formation, not the opposite as appears to be argued in the brief.

Concerning the examiner's anticipation rejection of claims 25-29, 31, 34, 35, 43, 46, 52-56 and 61-65 over Guiselin, we note that appellants present two separate claim groupings:

I. Claims 25-29, 31, 34, 35, 43 and 46; and

II. Claims 52-56 and 61-65.

Appellants state that the claims of each of these separate groupings stand or fall together. Accordingly, we select claims 25 and 52 as the representative claims for each of those respective claim groupings, on which we shall decide this appeal with respect to the examiner's rejection. See 37 CFR § 1.192(c)(7) and (c)(8), as in effect at the time of filing of appellants' brief.²

In the case before us, the examiner has determined that Guiselin discloses, expressly or inherently, a coated transparent substrate that corresponds with the subject matter of the rejected claims as set forth at page 4 of the answer. In this regard, the examiner (answer, page 4) refers to the disclosure of Guiselin, particularly at column 2, lines 25-29 and column 4, lines 30-54.

² Also, see the current regulation as to separate claim arguments as set forth in 37 CFR § 41.37(c)(1)(vii) (September 13, 2004).

Regarding representative claim 25, appellants (brief, page 5) acknowledge that Guiselin discloses a substrate carrying a coating stack that includes dielectric layers interleaved with metallic (silver) layers or films. Moreover, appellants acknowledge that Guiselin discloses the use of nickel-chromium based barrier and/or bonding films and that there could be some oxidation (partial oxidation) of such a nickel-chromium layer above the metal layer (3) of Guiselin's drawing figure. See page 6 of the brief. However, appellants argue that representative claim 25 requires that "each of the dielectric coating layers comprises a sub-layer based on a partially but not totally oxidized combination of at least two metals" (claim 25) and Guiselin does not meet that limitation in that the bonding layer associated with the dielectric layer (2) that is below the metal layer (3) of Guiselin (see Guiselin's drawing figure) is not oxidized, as the representative claim requires.

While the examiner generally agrees with appellants' assessment of the teachings of Guiselin as to the oxidation of a nickel-chromium sublayer (bonding layer) located below illustrated metal layer (3), the examiner maintains that representative claim 25 is not so limited as argued by appellants (answer, pages 11 and 12). Consequently, the resolution of the

issues brought before us with respect to the examiner's anticipation rejection of representative claim 25, hinges on a correct interpretation of the limitations set forth in that claim.

Concerning this contested claim construction issue, we note that, during examination proceedings, claims are to be given their broadest reasonable interpretation consistent with the specification as they would be understood by one of ordinary skill in the art. In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000); In re Sneed, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983). In so doing certain rules of claim construction apply. In particular, the term "comprising," (claim 25, line 1) permits the inclusion of other non-recited layers, elements or materials in the claimed product. See In re Baxter, 656 F.2d 679, 210 USPQ 795 (CCPA 1981).

Considering the claim 25 requirement for a coating stack comprising at least one metallic coating layer that is in contact with two dielectric coating layers wherein each of those dielectric coating layers, prior to a bending or tempering heat treatment, include a sub-layer based on a partially but not totally oxidized combination of metals, we note that the term "comprising" results in the claimed product being open to the

presence of other metallic coating layer(s) that are not sandwiched between two dielectric coating layers of the type recited for the at least one metallic coating layer of claim 25. For example, claim 25 is open to the inclusion of another metallic coating layer that is in contact with a dielectric coating layer that does not require a partially oxidized sublayer to be associated therewith.

Moreover, even if we could agree with appellants' argument that the language of claim 25 precludes the nickel-chromium layer beneath metal film 3 of Guiselin, we do not find a requirement in the language of claim 25 specifying that the substrate carrying coating stack is one that has not undergone a bending or tempering type of heat treatment, as argued by appellants.³ In this regard, the examiner has asserted that appellants have not established an actual product distinction for their coated

³ In this regard, the claim language "adapted to withstand a bending or tempering type of heat treatment..." specifies a functional limitation of the claimed product as opposed to a limitation of a process of making a coated substrate that requires no bending or tempering type of heat treatment. Also, see, e.g., appealed claim 48 (grouped together with claim 25 by appellants), which claim reasonably suggests that the coated product of claim 25 includes products that have been subjected to tempering and/or bending, by specifying a windshield that includes the substrate product of claim 25. Also see, claim 45, which specifies post bending or tempering properties of the coating stack of claim 25.

substrate (after heat treatment) over that disclosed by Guiselin (answer, pages 13 and 14). On this record, we agree with the examiner's factual determination in support of anticipation by Guiselin, which determination appellants have not convincingly refuted by the claim construction arguments made in the brief.

Similarly, regarding representative claim 52 and the separately grouped claims 52-56 and 60-65, we note that appellants offer the same basic argument for representative claim 52 in asserting that there is no disclosure of partial oxidation of a sublayer beneath each metal layer (brief, page 8) in Guiselin. However, representative claim 52 is not so limited. In this regard, claim 52 does not require that all of the non-absorbent transparent coating layers of the stack include a partially but not totally oxidized combination of at least two metals but rather that a metallic coating layer of the stack is preceded by such a layer and followed by such a layer. The examiner has determined that Guiselin discloses such a stack arrangement. As with representative claim 25, the term "comprising" is employed in representative claim 52 and allows for the inclusion of other layers in the stack. Consequently, appellants' insistence that claim 52 is limited to a stack that includes partially oxidized sublayers beneath each metal layer is

not persuasive. See In re Self, 671 F.2d 1344, 1350-1351, 213 USPQ 1, 7 (CCPA 1982) (when the claim does not recite allegedly distinguishable features, "appellant[s] cannot rely on them to establish patentability.").

Accordingly, on this record, we shall affirm the examiner's anticipation rejection of claims 25-29, 31, 34, 35, 43, 46, 52-56 and 61-65 over Guiselin.

§ 103(a) Rejections

The examiner rejects claims 36-42, 44, 45, 47, 48, 58, 59, 67 and 68 under 35 U.S.C. § 103(a) as being unpatentable over Hartig. Appellants do not argue the rejected claims separately. Accordingly, we select claim 59 as the representative claim. Hartig (column 8, lines 25-43 and column 9, lines 41-45) discloses that the coated glass sheets can be treated with heat and are bendable and result in a glass product with an emissivity less than 11. In this regard, the examiner has reasonably found that the optical properties of the coated glass articles can be adjusted by varying the compositions and thicknesses of the coating layers. Moreover, the examiner has determined that achieving a workable or optimum emissivity for the article made including an emissivity as claimed in representative claim 59 would have been obvious to one of ordinary skill in the art at

the time of the invention. Rather than contesting the examiner's obviousness determination as to the here rejected claims based on the limitations of any claims to which this rejection pertains, appellants hinge their arguments on the arguments made against the examiner's anticipation rejection. On this record, we shall sustain the examiner's obviousness rejection of claims 36-42, 44, 45, 47, 48, 58, 59, 67 and 68.

The examiner rejects claims 60 and 69-71 under 35 U.S.C. § 103(a) as being unpatentable over Hartig in view of Anderson or Proscia. Appellants do not argue the rejected claims separately. Accordingly, we select claim 60 as the representative claim. We refer to pages 10 and 11 of the answer for the examiner's statement of the rejection. Rather than contesting the examiner's obviousness determination as to the here rejected claims based on the limitations of any claims to which this rejection pertains, appellants hinge their arguments on the arguments made against the examiner's anticipation rejection. On this record, we shall sustain the examiner's obviousness rejection of claims 60 and 69-71.

The examiner rejects claims 36-42, 44, 45, 47 and 48 under 35 U.S.C. § 103(a) as being unpatentable over Guiselin. Appellants do not argue the rejected claims separately.

Accordingly, we select claim 36 as the representative claim. We refer to pages 5-7 of the answer for the examiner's statement of the rejection. Rather than contesting the examiner's obviousness determination as to the here rejected claims based on the limitations of any claims to which this rejection pertains, appellants hinge their arguments on the arguments made against the examiner's anticipation rejection. On this record, we shall sustain the examiner's obviousness rejection of claims 36-42, 44, 45, 47 and 48.

The examiner rejects claim 30 as being unpatentable under 35 U.S.C. § 103(a) over Guiselin in view of Jenkinson. Appellants do not argue the rejected claims separately. We refer to page 7 of the answer for the examiner's statement of the rejection. Rather than contesting the examiner's obviousness determination as to the here rejected claims based on the limitations of the claim to which this rejection pertains, appellants hinge their arguments on the arguments made against the examiner's anticipation rejection. On this record, we shall sustain the examiner's obviousness rejection of claim 30.

The examiner rejects claims 30, 32, 33, 60 and 69-71 under 35 U.S.C. § 103(a) as being unpatentable over Guiselin in view of Anderson or Proscia. Appellants do not argue the rejected claims

separately. Accordingly, we select claim 32 as the representative claim. We refer to pages 7 and 8 of the answer for the examiner's statement of the rejection. Rather than contesting the examiner's obviousness determination as to the here rejected claims based on the limitations of any claims to which this rejection pertains, appellants hinge their arguments on the arguments made against the examiner's anticipation rejection. On this record, we shall sustain the examiner's obviousness rejection of claims 30, 32, 33, 60 and 69-71.

CONCLUSION

The decision of the examiner to reject claims 25-28, 31-35, 43, 46, 49-57 and 61-66 under 35 U.S.C. § 102(b) as being anticipated by Hartig; to reject claims 25-29, 31, 34, 35, 43, 46, 52-56 and 61-65 under 35 U.S.C. § 102(b) as being anticipated by Guiselin; to reject claims 36-42, 44, 45, 47, 48, 58, 59, 67 and 68 under 35 U.S.C. § 103(a) as being unpatentable over Hartig; to reject claims 60 and 69-71 under 35 U.S.C. § 103(a) as being unpatentable over Hartig in view of Anderson or Proscia; to reject claims 36-42, 44, 45, 47 and 48 under 35 U.S.C. § 103(a) as being unpatentable over Guiselin; to reject claim 30 under 35 U.S.C. § 103(a) as being unpatentable over Guiselin in view of Jenkinson; and to reject claims 30, 32, 33, 60 and 69-71 under 35

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

THOMAS A. WALTZ
Administrative Patent Judge

PETER F. KRATZ
Administrative Patent Judge

BEVERLY A. PAWLIKOWSKI
Administrative Patent Judge

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